

R E M A R K S

This Amendment accompanying this application is being made to cancel claims 1-18 without prejudice or disclaimer of the subject matter therein and to substitute new claims 19-36 therefor, in order to avoid multiple-dependent claim fees and to place this application in proper form and condition for examination as of the filing of this national stage application. No multiple-dependent claim fees apply.

Therefore no multiple-dependent claim fees should be charged in this application.

The specification has also been amended for formal improvement to comply with USA practice.

An Abstract is presented on a separate page herewith.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached pages are captioned "Version with markings to show changes made"

The Examiner is respectfully requested to enter this Amendment prior to calculation of the filing fee as of the national stage filing date, and to provide an action on the merits.

Respectfully submitted
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USA National Stage Patent Application
PCT/EP00/12824 filed December 15, 2000
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DYEING OR WASHING INSTALLATION FOR NARROW
TEXTILE FABRIC AND METHOD OF REMOVING AN
EXCESS AMOUNT OF COLORANT OR DETERGENT
Priority: German Patent Application
199 63 854.3 filed December 30, 1999

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Page 1, please replace the paragraph beginning at line 34 with
the following rewritten paragraph:

This series of problems is solved firstly and substantially [by
the subject-matter of Claim 1, based on the idea that] wherein
the narrow fabric is guided along a width-adapted suction nozzle,
disposed downstream of the dyeing or washing liquor. This
configuration firstly produces an improved, even application of
dye to the narrow fabric. In addition, there is improved removal
of excess amounts of dyeing or washing liquor. It is preferred
for the suction nozzle to be adapted to the width of the narrow
fabric, so that uniform suction removal takes place over the
entire width of the fabric. In particular, when the suction
nozzle is disposed downstream of a dyeing installation, a uniform
application of dye in the region of the longitudinal bordering
edges of the narrow fabric can be obtained. It is preferred for
the suction removal to take place by means of a pre-adjustable
vacuum pump. As mentioned, vacuum suction removal of this type,
by means of a suction nozzle, may be disposed downstream of a
padding machine. In addition, it is also conceivable for it to
be disposed at the outlet of a steamer and of a washing basin.

The advantage of vacuum suction removal is better dye penetration in the narrow fabric and an improved possibility for cleaning, and as a result greater fastness. Furthermore, if a suction nozzle according to the invention is disposed on a padding machine, reduced consumption of dye can be obtained. If a drier is provided directly downstream of a washing installation for narrow textile fabrics, provision of a suction nozzle according to the invention in between produces the advantageous effect that less power in comparison with the conventional methods is necessary in the region of the drier, since the suction removal from the narrow textile fabric conducted through the washing installation results in less residual moisture than in the case of the conventional squeezing method. It proves to be particularly advantageous for the negative pressure at the outlet of the suction nozzle to be measured and kept constant at a preset value. Furthermore, in the case of a dyeing or washing installation in which the narrow fabric is passed through the dyeing or washing liquor in a number of passes, it is provided that the removal of the excess amount takes place between two passes of the narrow fabric through the dyeing or washing liquor. It is preferred in this case that the narrow fabric is guided along a suction nozzle after each pass. In a further development of the subject-matter of the invention, it is provided that the suction removal is carried out at right angles to the direction of movement of the narrow fabric. Furthermore, it proves to be advantageous that the width of the suction nozzle can be set according to the width of the narrow fabric in question. The suction removal according to the invention is conceivable on the one hand for inelastic narrow fabric. In addition, it is also possible for the narrow fabric to consist of elastic material.

To counteract irregular dyeing of such material caused by stretching of the elastic fabrics, it is provided that the narrow fabric is guided along the suction nozzle by means of a screen belt. This screen belt serves in the region of the suction nozzle as a support, it being preferred for motor-driven circulating endless screen belts to be provided. Furthermore, it is proposed for the suction removal to take place in the upward and/or downward direction. This configuration allows suction removal to be carried out on one side and on both sides of the narrow textile fabric, it also being possible for the suction nozzle to be disposed vertically and horizontally. In addition, a design in which the suction removal takes place at an inclination with respect to the narrow fabric is also possible [conceivable]. In the case of suction removal from both sides of elastic narrow fabric, it is further preferred for a screen belt to be associated with each suction nozzle, a circulating endless screen belt being preferred, so that the narrow fabric is prevented from stretching both on the upper side and on the underside by means of the screen belt. Moreover, there is the possibility of squeezing taking place upstream of suction removal, so that, for example downstream of a liquor application tank, the narrow fabric is firstly squeezed in a known way and subsequently guided along a suction nozzle, producing a uniform distribution of the dye particles within the fabric. A configuration in which suction removal is carried out from a plurality of narrow fabrics parallel to one another proves to be particularly advantageous. In this case, a width-adapted suction nozzle may be associated with each narrow fabric, on one or both sides. However, it is also conceivable to dispose a suction nozzle extending over the entire width on one or both sides of

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